



The Solution

Client:

John Deere Medical Group of Waterloo, P.C.
Location: Waterloo, IA

Challenge:

Provide the client with a full blown electronic health records and practice management system along with related supporting software

Solutions:

Implement Windows Server 2003, Microsoft Exchange, Zetafax Server, Practice Partner Patient records

Implement secure VPN access.

Benefits:

Data is easily accessible inside and outside the office

Practitioners have round the clock access to the medical records from anywhere.

Technologies Utilized:

Microsoft Windows Server 2003, SonicWall TZ170, Zetafax Server, Panda AntiVirus, Mail Marshall, Sunbelt software Counterspy Enterprise.

John Deere Medical Group of Waterloo is a ten provider family practice located in Waterloo, Iowa. They had been using a homegrown EMR from 1996-2001. In 2000, it was decided that the homegrown EMR was not meeting the needs of the providers and support staff. For that reason, a search was begun to find a suitable replacement based on a small but important list of criteria developed by the providers and EMR committee.

After an exhaustive search, McKesson Practice Partner was chosen because it met the needs of the staff and allowed for a great degree of flexibility in terms of getting the data into the patient chart.

In 2001, Practice Partner was rolled out along with new workstations for the exam rooms and office staff. Fifty five workstations were deployed along with two servers, running Windows Server 2000 at the time. One server was a file and print server while the other server ran Microsoft Exchange 2000 and a Panda Antivirus administration server. A 3Com Internet Firewall was installed to allow for remote access connections to the electronic health record via Microsoft Terminal Server.

Fast forward to 2007. Parallax Solutions was asked to come up with a budget friendly way to solidify the end user experience and provide more speed when using the electronic health record. After a careful analysis, we recommended that the practice hold on to their aging hardware and utilize them as thin client machines rather than replacing them with newer models at a high cost. We implemented a quad core HP DL380 server with 6gb RAM and 15k rpm drives in a RAID 5 array. Windows Server 2003 was utilized to provide terminal services to the thin client machines and home user connections. The server has hardened from a security standpoint and then outfitted

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With Panda Antivirus and Sunbelt Software's Counterspy Enterprise to give maximum protection from Internet borne threats. All exam room machines were converted to thin clients as well as a handful of other heavily used machines. The result was a dramatic increase in speed for the end user and a savings of about \$15,000.

The billing side of Practice Partner is handled by a billing service located in the Quad Cities, which is 90 miles away. A solution was needed to allow them to connect to JDMG to use the Practice Partner software while being able to use local printers for printing patient statements. Parallax set up a site-site VPN between the offices, setting up billing office printers on the in-house Windows Terminal server. The result was a robust secure connection that allowed direct use of Practice Partner Billing with the added benefit of being able to print to local printers at the billing office.

Other projects:

- We developed a scanning solution to allow the practice to go paperless. This solution utilizes a combination of macros, optical character recognition, image scanning, and our own software developed to help get the scanned images attached directly to the electronic chart.
See our software at <http://www.parallaxsolutions.net/scanassistant.html>
- We implemented an FTP server to receive encrypted lab result files from the hospitals. These files are retrieved, decrypted, and run through an interface to take the HL7 formatted results and place the results in the patient chart.
- We implemented advanced data reporting capability using Microsoft Access. This helped the practice achieve NCQA recognition for treatment of diabetes and heart/stroke patients since they were able to easily see status and progress.
- Developed an Intranet site which serves as a repository for forms, patient education, support documents, etc.
- Developed Internet site <http://www.jdmg.com>
- Implemented insurance card scanning for direct import into Practice Partner
- Developed electronic encounter form process to speed charge entry.
- Implemented Phone Tree Pro to process Practice Partner schedule exports and place patient reminder calls to patients. This cut no-shows dramatically.
- Implemented secure wireless access for laptops using Cisco Aironet WAPs.
- Developed process to fax Rx orders from Practice Partner using Zetafax Server.
- Developed process to receive incoming faxes to Zetafax Server so that the faxes could be attached directly to the electronic health record.
- Developed several Practice Partner templates to speed data input and code visit correctly.

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As they stand now, JDMG utilizes three servers. First, they have a Windows 2003 file server that houses Practice Partner and data files. A second Windows 2003 server handles Microsoft Exchange, Zetafax Server, FTP services to receive lab data from hospitals, Outlook Web Access, Panda Antivirus management, and Counterspy Enterprise management. The third server is a Microsoft Windows Server 2003 Terminal server that serves 30 clients without breaking much of a sweat. All client machines are fed critical updates by an in-house Windows Update Service and they are protected by Panda AntiVirus. The perimeter is safeguarded by a SonicWall TZ170 firewall providing HIPPA compliant 3des IPsec vpn tunnels to remote clients. To turn spam away, an e-mail gateway running Mail Marshall was implemented.

Our continuing relationship with John Deere Medical Group has been rewarding for all involved. We know that healthcare is in a state of constant change and we're ready to help JDMG stay on the cutting edge in the metro area.